

Chrysolepis chrysophylla (Dougl.) Hjelmqvist
giant golden chinquapin
Fagaceae (Oak Family)

Status: State Sensitive

Rank: G5S2

General Description: Adapted from Hitchcock et al. (1964): Large shrub or small tree 10 to 98 ft (3 to 30 m) tall with thick and heavily furrowed bark. The leaves have petioles that are scarcely $\frac{1}{2}$ in. (1 cm) long, with blades that are lanceolate to elliptic, and generally $1\frac{1}{4}$ to 6 in. (3 to 15 cm) long. The leaves are entire, thick, tough, leathery, dark green, and hairless or sparsely covered with minute, branlike scales and dense, matted, woolly hairs above, yellow-green to golden and densely covered with minute, branlike scales and dense, matted, woolly hairs beneath. The base of the leaf is acute and gradually to abruptly acuminate. The involucre is a 4-valved, spiny bur 2/3 to $\frac{3}{4}$ in. ($1\frac{1}{2}$ to 2 cm) broad, and contains usually 1, but sometimes 2, hard-shelled nuts and is about $\frac{1}{2}$ in. (10 mm) long, but sometimes up to 2/3 in. (15 mm) in length.

Identification Tips: Golden chinquapin is the only species in the *Castanopsis* genus found in the Pacific Northwest. *Castanopsis* (chinquapin) and *Quercus* (oak) are the two genera from the oak family that are found in our area. *Castanopsis* has spreading or erect staminate catkins, entire leaves, and a spiny bur-like involucre enclosing 1 to 3 nuts. *Quercus* has drooping staminate catkins, lobate to pinnatifid leaves (in the Pacific Northwest), and the fruit is an acorn with a single nut and a cuplike involucre.

Phenology: The phenology of chinquapin varies widely over its range. However, flowers are not needed for identification, since leaves and fruits are distinctive.

Range: This species is known from two disjunct clusters in Washington: Mason County near Hood Canal and Skamania County near and within the Columbia Gorge. It is more common from the Columbia River Gorge to southwest Oregon, northwest California and southward to Monterey County, California. The Mason County occurrences are at the northernmost known location for the species.

Habitat: *C. chrysophylla* has a wide ecological amplitude and several growth forms; however, it is rarely a dominant component of any stand. In Washington, it can be found in dry open sites to fairly thick woodlands and from below 500 to 2500 ft. (152-762 m) elevation. In Washington, this species is associated with Douglas fir (*Pseudotsuga menziesii*), western hemlock (*Tsuga heterophylla*), Pacific rhododendron (*Rhododendron macrophyllum*), salal (*Gaultheria shallon*), dull Oregon grape (*Berberis nervosa*), vine maple (*Acer circinatum*), and evergreen huckleberry (*Vaccinium ovatum*).

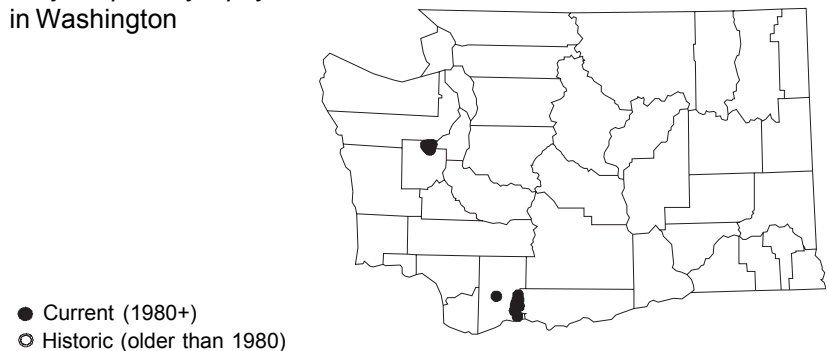
Ecology: *C. chrysophylla* is the only known host to the golden hairstreak butterfly (*Habroda grunus herri*), which is listed as sensitive by the USFS and a State Threatened species by Washington State Department of Wildlife (proposed State

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Known distribution of
Chrysolepis chrysophylla
in Washington



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Endangered). The golden hairstreak butterfly has been found associated with the chinquapin population in Skamania County; however, it has not yet been located within the Mason County population. Chinquapin appears to be at its competitive best on sites that are relatively infertile and droughty (McKee 1990).

State Status Comments: Because the species is at the northernmost point of its range in Washington and the populations are reproductively isolated, they are likely to have developed significant genetic differences and different environmental tolerances from populations in the heart of the species' range (Salstrom 1992).

Inventory Needs: Mason and Skamania counties should be systematically surveyed for additional occurrences, and updated information about these populations should be collected. Documented occurrences should be re-visited.

Threats and Management Concerns: Threats to this species include timber harvest, conversion to agriculture, residential or commercial development, overtopping by conifers, road construction, and natural disasters, including fire, windthrow, and fungal infections. A conservative approach to management of *C. chrysophylla* on public land is recommended because Washington populations are both at the periphery of the species' range and disjunct populations. Some existing populations are at varying degrees of degradation, which is likely due to heart rot and fungus on the leaves.

Comments: This species is also known as *Castanopsis chrysophylla*, as listed in *Vascular Plants of the Pacific Northwest* (Hitchcock 1964).

References:

- Hitchcock, C.L., A. Cronquist, M. Ownbey, and J.W. Thompson. 1964. *Vascular Plants of the Pacific Northwest, Part 2: Salicaceae to Saxifragaceae*. University of Washington Press, Seattle, WA. 597 pp.
- McKee, Arthur. 1990. *Castanopsis chrysophylla* (Dougl.) A. DC. Giant Chinquapin. From *Silvics of North America. Volume 2: Hardwoods*. Russell M. Burns and Barbara Honcala, Tech. Coordinators. USDA Forest Service Handbook 654.
- Salstrom, Debra. 1992. Draft of the Habitat Management Guidelines for *Chrysolepis chrysophylla* (Dougl.) Hjelmqvist on the Olympic National Forest. On file with the Washington Natural Heritage Program.